

## MOV Frequency Domain Analysis

This course provides instruction on Motor-Operated Valve (MOV) Actuator Frequency Identification, Frequency Domain Characteristics, FFT Tracking & Trending, and Repeatability of Acquisition/Analysis Techniques. This course is designed to further instruct students who have previously received training on CRANE Nuclear MC<sup>2</sup>™ and/or MPM™ System(s) Data Acquisition and Analysis.

### TERMINAL OBJECTIVES:

Each student shall be required to pass a written test with a minimum score of 80% in order to successfully complete this course. Upon successful course completion, the student shall possess the knowledge to:



- select the proper data range and perform FFT analysis of MOV motor current data.
- calculate/predict fundamental frequencies present in MOV frequency spectrum.
- evaluate changes in MOV frequency domain data by using the various analysis tools provided in CRANE Nuclear Signature Software™ and understand the methods necessary to track and trend frequency domain data over time.

### ENABLING OBJECTIVES:

At the conclusion of this course, the student shall have an increased understanding of:

- the history of Fast Fourier Transform Analysis and be able to relate the application to MOVs.
- changes in frequency domain data that reveal concerns, which may affect MOV operability.
- the practice and importance of repeatability of acquisition and analysis techniques, as they apply to tracking and trending frequency domain data over time.

### SUPPLIED MATERIALS:

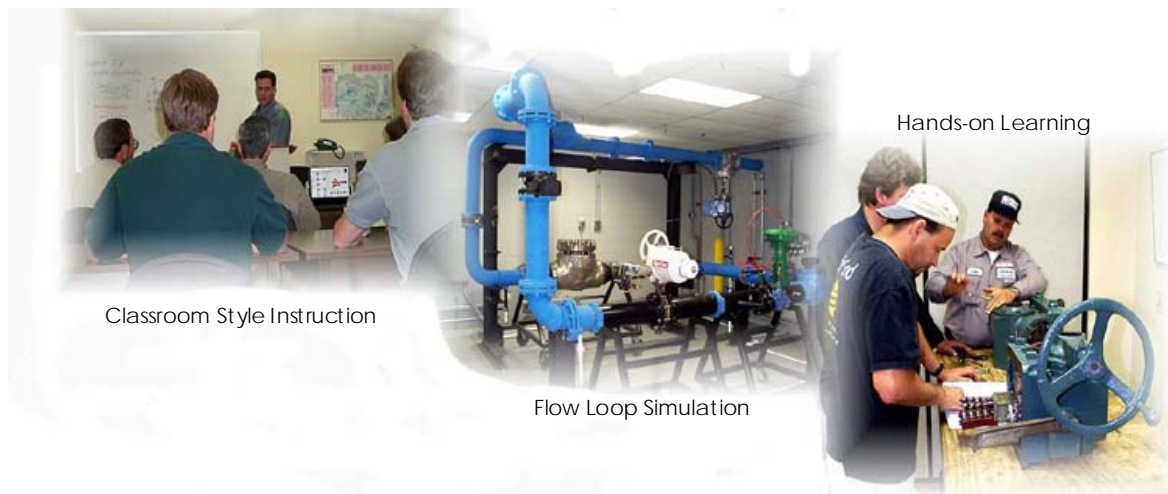
A *Training Manual* will be provided for each registered student.

In-class *Training Aides*, for courses performed at a CRANE Nuclear facility, will include all or some of the following: CRANE Nuclear MOV Test Equipment, Various Actuators, Instruments and Accessories.

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## Registration Guidelines

- Standard Class Size:** 6 Students per Instructor
- Maximum Class Size:** 8 Students
- Course Duration:** 3 Days
- Prerequisite:** Universal™/Viper™ 20/MPM™ Data Acquisition Training Course or the stand alone MC2™ System Data Acquisition and Analysis Training Course, plus a working knowledge of Limitorque® actuators



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